

What is claimed is:

Sub A37

1. An isolated DNA selected from the group consisting of:
  - (a) DNA comprising SEQ ID NO:1;
  - (b) DNA comprising SEQ ID NO: 3, with the proviso that nucleotides 130-132 are selected from the group consisting of ACA, ATA and ATC;
  - (c) DNA comprising SEQ ID NO:3, with the proviso that nucleotides 151-153 are selected from the group consisting of GAC and GCC.
  - (d) DNA comprising SEQ ID NO:3;
  - (e) DNA comprising nucleotides 29-487 SEQ ID NO:14
  - (f) DNA that encodes a polypeptide comprising the amino acid sequence of SEQ ID NO:2;
  - (g) DNA that encodes a polypeptide comprising the amino acid sequence of SEQ ID NO:4;
  - (h) DNA that encodes a polypeptide comprising the amino acid sequence of SEQ ID NO:4, with the proviso that the amino acid at residue 44 is selected from the group consisting of threonine and isoleucine and the amino acid at residue 51 is selected from the group consisting of aspartic acid and alanine.
  - (i) DNA that encodes a polypeptide comprising the amino acid sequence of SEQ ID NO:15;
  - (j) DNA comprising a DNA that is degenerate from the DNA of (a) through (i)
  - (k) DNA comprising a DNA that is at least 80% identical to the DNA of (a)-(j); and,
  - (l) DNA comprising a DNA that encodes amino acids 1 through 152 of SEQ ID NO:4.
2. An isolated DNA comprising a DNA that is at least 85% identical to DNA that encodes the polypeptide of SEQ ID NO:4.
3. An isolated nucleic acid molecule comprising a DNA the encodes the polypeptide of SEQ ID NO:4.

4. An isolated nucleic acid molecule comprising a DNA the encodes the polypeptide of SEQ ID NO:4, except that amino acid at residue 44 is selected from the group consisting of threonine and isoleucine.
5. An isolated nucleic acid molecule comprising a DNA the encodes the polypeptide of SEQ ID NO:4, except that amino acid 51 is selected from the group consisting of aspartic acid and alanine.
6. An isolated nucleic acid molecule comprising a DNA the encodes the polypeptide of SEQ ID NO:4, except that amino acid at residue 44 is selected from the group consisting of threonine and isoleucine and amino acid 51 is selected from the group consisting of aspartic acid and alanine.
7. An isolated DNA comprising a fragment of a DNA that encodes the polypeptide of claim 3, wherein the fragment has IL-1 activity.
8. An isolated DNA comprising a nucleic acid that encodes a polypeptide that is at least 85% identical to the polypeptide of SEQ ID NO:15.
9. An isolated DNA comprising a nucleic acid that encodes the polypeptide of SEQ ID NO:15.
10. An isolated DNA comprising a nucleic acid that encodes a fragment of the polypeptide of claim 6, wherein the fragment has IL-1 activity.
11. A vector comprising the DNA of claim 3.
12. A vector comprising the DNA of claim 6.
13. A vector comprising the DNA of claim 10.
14. A host cell comprising a vector of claim 12.

sub 157

15. A host cell comprising a vector of claim 14.
16. A method for producing a polypeptide, the method comprising culturing a host cell of claim 14 under conditions promoting expression of the polypeptide.
17. A method for producing a polypeptide, the method comprising culturing a host cell of claim 15 under conditions promoting expression of the polypeptide.
18. An isolated polypeptide comprising a polypeptide encoded by any of the DNAs of claim 1.
19. An isolated polypeptide comprising the amino acid sequence of SEQ ID NO:4.
20. An isolated polypeptide comprising the amino acid sequence of SEQ ID NO:4, except that the amino acid at 44 is selected from the group consisting of threonine and isoleucine and the amino acid at 51 is selected from the group consisting of aspartic acid and alanine.
21. An isolated polypeptide comprising a polypeptide that is at least 80% identical to a polypeptide of claim 20.
22. An isolated polypeptide comprising the amino acid sequence of SEQ ID NO:15.
23. An isolated polypeptide that is a fragment of the polypeptide of SEQ ID NO:4, wherein the fragment binds an IL-1 receptor family member.
24. An isolated polypeptide that is a fragment of the polypeptide of claim 20 wherein the fragment binds an IL-1 receptor family member.
25. An antibody that binds to a polypeptide of claim 20.

26. An antibody that binds to a polypeptide of SEQ ID NO:15.
27. An isolated antibody according to claim 25, wherein the antibody is a monoclonal antibody.
28. An oligomer comprising a polypeptide of claim 20.
29. An oligomer comprising a polypeptide of claim 24.
30. A method for identifying compounds that alter FIL-1 theta activity, the method comprising:
  - (a) mixing a test compound with the polypeptide selected from the group consisting of:
    - (i) a polypeptide comprising the amino acid sequence of SEQ ID NO:4, except that the amino acid at 44 is selected from the group consisting of threonine and isoleucine and the amino acid at 51 is selected from the group consisting of aspartic acid and alanine;. and,
    - (ii) a polypeptide that is a fragment of the polypeptide of SEQ ID NO:4, wherein the fragment binds an IL-1 receptor family member.
  - (b) determining whether the test compound alters FIL-1 theta activity of the polypeptide.
31. A method for identifying compounds that inhibit the binding activity of FIL-1 theta polypeptides, the method comprising:
  - (a) mixing a test compound with a polypeptide selected from the group consisting of:
    - (i) a polypeptide comprising the amino acid sequence of SEQ ID NO:4, except that the amino acid at 44 is selected from the group consisting of threonine and isoleucine and the amino acid at 51 is selected from the group consisting of aspartic acid and alanine;. and,

(ii) a polypeptide that is a fragment of the polypeptide of SEQ ID NO:4,

wherein

the fragment binds an IL-1 receptor family member and a binding partner of the polypeptide; and

(b) determining whether the test compound inhibits the binding activity of said polypeptide.

Add A67